Solid State Devices, Inc.
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SZN5913 thru SZN5956 and SZN5913SMS thru SZN5956SMS

DESIGNER'S DATA SHEET

Part Number/Ordering Information [6/]

SZN ___ ___ ___ ___

Screening [7/]
__ = Not Screened
TX = TX Level
TXV = TXV
S = S Level

Package Type
__ = Axial Leaded
SMS = Surface Mount Square Tab

Tolerance
__ = 5%
C = 2%
D = 1%

Voltage/Family
5913 - 5956: 3.3V thru 200V, See Table on Page 2

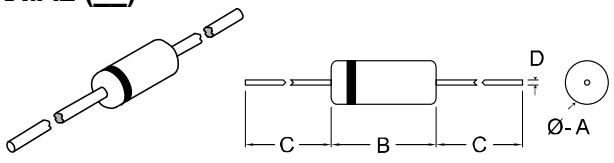
1.5 WATT 3.3 – 200 VOLTS ZENER DIODES

FEATURES:

- **Hermetically Sealed in Glass**
- **Rated at 1.5 W**
- **Available in Axial and Square Tab Surface Mount (SMS) version**
- **TX, TXV, and S-Level Screening Available** [7/]
- **Tolerances of 5%, 2%, or 1% Available.**
- **Replaces 1N5913 – 1N5956**

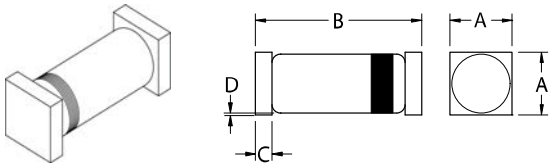
Maximum Ratings	Symbol	Value	Units
Nominal Zener Voltage	V_Z	3.3 - 200	**V**
Maximum Zener Current	I_{ZM}	7.0 - 454	**mA**
Forward Surge Current (8.3 msec Puls)	I_{FSM}	.072 – 4.2	**A**
Continuous Power	P_D	1.5	**W**
Operating and Storage Temp.	**Top** **Tstg**	-65 to +175 -65 to +200	**ºC**
Thermal Resistance, Junction to Lead, L=3/8" (Axial)	$R_{\theta JL}$	110	**ºC/W**
Thermal Resistance, Junction to End Cap (SMS)	$R_{\theta JE}$	85	**ºC/W**

AXIAL (__)



DIM	MIN.	MAX
A	.080"	.107"
B	.160"	.181"
C	1.00"	---
D	.028"	.034"

SQUARE TAB (SMS) All dimensions are prior to soldering



DIM	MIN.	MAX.
A	.125"	.135"
B	.200"	.235"
C	.023"	.027"
D	Body to Tab Clearance: .003"	

NOTE: All specifications are subject to change without notification.
SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: Z00012C **DOC**

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SZN5913 thru SZN5956 and SZN5913SMS thru SZN5956SMS

Electrical Characteristics @ 25°C

PART NUMBER	Nominal Zener Voltage (note 1)	Zener Test Current	Maximum Zener Impedance (note 2)	Maximum Knee Impedance		Maximum Reverse Leakage Current		Maximum Continuous Current (note 3)	Maximum Surge Current (note 4)
	VZ @ IZT	IZT	ZZ @ IZT	ZZK @ IZK		IR @ VR	VR (note 8)	IZM	IZSM
	VOLT	mA	Ohms	Ohms	mA	µA	Volts	mA	Amps
SZN5913	3.3	113.6	10	500	1.0	100	1.0	454	4.2
SZN5914	3.6	104.2	9.0	500	1.0	75	1.0	416	3.9
SZN5915	3.9	96.1	7.5	500	1.0	25	1.0	384	3.6
SZN5916	4.3	87.2	6.0	500	1.0	5.0	1.0	348	3.3
SZN5917	4.7	79.8	5.0	500	1.0	5.0	1.5	319	3.0
SZN5918	5.1	73.5	4.0	350	1.0	5.0	2.0	294	2.7
SZN5919	5.6	66.9	2.0	250	1.0	5.0	3.0	267	2.5
SZN5920	6.2	60.5	2.0	200	1.0	5.0	4.0	241	2.3
SZN5921	6.8	55.1	2.5	200	1.0	5.0	5.2	220	2.1
SZN5922	7.5	50	3.0	400	.5	5.0	6.0	200	1.9
SZN5923	8.2	45.7	3.5	400	.5	5.0	6.5	182	1.7
SZN5924	9.1	41.2	4.0	500	.5	5.0	7.0	164	1.6
SZN5925	10.0	37.5	4.5	500	.25	5.0	8.0	150	1.4
SZN5926	11.0	34.1	5.5	550	.25	1.0	8.4	136	1.3
SZN5927	12.0	31.2	6.5	550	.25	1.0	9.1	125	1.2
SZN5928	13.0	28.8	7.0	550	.25	1.0	9.9	115	1.1
SZN5929	15.0	25	9.0	600	.25	1.0	11.4	100	.95
SZN5930	16.0	23.4	10	600	25	1.0	12.2	93	.90
SZN5931	18.0	20.8	12	650	.25	1.0	13.7	83	.79
SZN5932	20.0	18.7	14	650	.25	1.0	15.2	75	.71
SZN5933	22.0	17	17.5	650	.25	1.0	16.7	68	.65
SZN5934	24.0	15.6	19	700	.25	1.0	18.2	62	.60
SZN5935	27.0	13.9	23	700	.25	1.0	20.6	55	.53
SZN5936	30.0	12.5	28	750	.25	1.0	22.8	50	.48
SZN5937	33.0	11.4	33	800	.25	1.0	25.1	45	.43
SZN5938	36.0	10.4	38	850	.25	1.0	27.4	41	.40
SZN5939	39.0	9.6	45	900	.25	1.0	29.7	38	.37
SZN5940	43.0	8.7	53	950	.25	1.0	32.7	34	.33
SZN5941	47.0	8.0	67	1000	.25	1.0	35.8	31	.30
SZN5942	51.0	7.3	70	1100	.25	1.0	38.8	29	.28
SZN5943	56.0	6.7	86	1300	.25	1.0	42.6	26	.26
SZN5944	62.0	6.0	100	1500	.25	1.0	47.1	24	.23
SZN5945	68.0	5.5	120	1700	.25	1.0	51.2	22	.21
SZN5946	75.0	5.0	140	2000	.25	1.0	56	20	.19
SZN5947	82.0	4.6	160	2500	.25	1.0	62.2	18	.17
SZN5948	91.0	4.1	200	3000	.25	1.0	69.2	16	.16
SZN5949	100.0	3.7	250	3100	.25	1.0	76	15	.14
SZN5950	110.0	3.4	300	4000	.25	1.0	83.6	13	.13
SZN5951	120.0	3.1	380	4500	.25	1.0	91.2	12	.12
SZN5952	130.0	2.9	450	5000	.25	1.0	98.8	11	.11
SZN5953	150.0	2.5	600	6000	.25	1.0	114	10	.095
SZN5954	160.0	2.3	700	6500	.25	1.0	121.6	9.0	.089
SZN5955	180.0	2.1	900	7000	.25	1.0	136.8	8.0	.079
SZN5956	200.0	1.9	1200	8000	.25	1.0	152	7.0	.072

NOTES:

1) All zener voltages are measured with an automated test set using a 35 msec test time. Longer or shorter test time will have a corresponding effect on the measured value due to heating effects.
2) Zener impedance is derived from the AC voltage divided by the AC current with RMS value of 10% of DC zener test current superimposed on the test current.
3) Ratings based on maximum zener voltage of individual units (leaded units).
4) Figures shown are for a peak sinusoidal surge current of 8.3 msec duration, non-repetitive. The 8.3 msec square pulse rating is 71% of the value shown.
5) SSDI standard marking consists of a contrasting color cathode dot or band. Part number information is included on packaging labels.

6/ For Ordering Information, Price, and Availability- Contact Factory.

7/ Screening based on MIL-PRF-19500. Screening flows available on request.

8/ Voltages are shown for 5% tolerance devices.